IMPLEMENTATION PROCEDURES (IP)
CHANGE NOTICE

SECTION 16 - UPGRADING GCCS 2.1 SYSTEMS

CH	DATE	POC	SECT	REMARKS
1	1/17/97	C. Burritt	16.2.2	Added section 16.2.2 to clarify how to build Kernel Network Installer.
			16.4	Step-3A modified to address mounting of Kernel Network Installer that is not on */h/data/global*.
			16.7	Step-1 changed to inform installer to go to section 7.6 after upgrade is completed.

SECTION 16. UPGRADING GCCS 2.1 SYSTEMS

16.1 GCCS COE Kernel Version 2.2 Upgrade Description

The GCCS COE Kernel Version 2.2 has been designed to upgrade GCCS Version 2.1 systems to the 2.2 level. During the upgrade the following is done to the system:

a. Obsolete or superseded Solaris 2.3 patches are backed out.

b. The latest set of SUN recommended OS and security patches are installed (as of 30 September 1996, Reference Appendix D)

c. The SecAdm and SysAdm account groups are updated.

d. The secman and sysadmin accounts are updated.

e. The old GCCS COE, JMCIS COE, UB Core, and GCCS patch segments are removed.

f. When installed on the account server (location of */h/USERS*), all users *.cshrc, .login, .Xdefaults,* xsession, and .mwmrc files are replaced. The users original versions are moved up one directory.

g. A subset of the security fixes identified in the TFM are implemented.

16.2 Pre-Installation Instructions

16.2.1 Network Installer Instructions

The four segment tapes that were released with GCCS Version 2.2 contain all the segments required to build a GCCS Version 2.2 system. It is recommended that all the GCCS Version 2.1 segments currently installed on the Network Installers at a site be removed. When loading segments on the Network Server you should select the segments on the GCCS Version 2.2 tapes in the order that they appear on the tape. If the segments are not loaded in sequential order the Network Installer will be corrupted.

16.2.2 Kernel Network Installer Instructions

The GCCS COE Kernel version 2.2 tape contains two tar files. The first tar file is used to load the GCCS COE Kernel directly from tape. The second file can be placed on a shared file system and loaded over the network. This option is significantly faster than using tape. To create a Kernel Network Installer identify a platform with a share file system that has at least 66 Mbytes of disk space available. Execute the following steps on the identified Kernel Network Installer:

cd < shared file system name **> <Return>**
mt -f /dev/rmt/<tape drive number**>mn fsf 1**
tar xvf /dev/rmt/<tape drive number**>m**

The following compress tar file will be extracted from the tape: kernel_2.2_tar.

16.3 Pre-Installation Instructions

16.3.1 Minimum Disk Space Requirements

To successfully perform an upgrade there must be at least 10 Mbytes of disk space available in the */* partition or the */var* partition if it is a separate partition. To determine how much disk space is available execute the following:

df -k /var **<Return>**

NOTE: Under the "Available" column if there is at least 10 Mbytes.

16.3.2 Required Patch Segments

If a GCCS Version 2.1 segment listed under the "GCCS 2.1 Segments" column of Table 16.3.2-1 is installed on the system the GCCS Version 2.2 segment listed under the "GCCS 2.2 Segments" column must be installed prior to performing the upgrade.

Table 16.3.2-1. Required Patch Segments

GCCS 2.1 Segment	Version	GCCS 2.2 Segment	Version
Auditing	2.1.1	BSM Patch	1.1.06
Ad Hoc Query	5.6.0.2.01	AdHoc Query Patch 9	5.5.6c
Ad Hoc Query Character	5.6.0.2	AdHoc Query Char Patch 9	5.5.6c

16.3.3 Saving Configuration Information from UB 2.1.3.5

Several configuration items need to be saved and/or taken note of when performing an upgrade of the Unified Build software from 2.1.3.5 to 3.0.1.6G. The following paragraphs outline steps necessary to retain configuration information.

1. Broadcasts: In order to retain the Broadcast configuration for re-entry after the installation of UB3.0.1.6G, perform the following on the TDBM Master machine:

a. Under the FOTC/Bcst Pull Down Menu (PDM), select Broadcasts.

b. Highlight a broadcast and select Edit. Print the Edit Window.

c. Select Header and print the Header Edit Window. Go back to the previous window and select Filter and print the Filter Edit window.

d. Repeat for each broadcast. Keep the printouts together for each broadcast.

e. After UB 3.0.1.6G has been loaded, use the printouts toreenter the Broadcast configuration on the TDBM Master machine.

2. Communications Configuration: In order to retain the Broadcast configuration for rentry after the installation of UB3.0.1.6G, perform the following on the TDBM Master machine:

a. Under the Comms PDM, select Communications.

b. Print the list of communications channels.

c. Double click each communication channel and print each Edit Channel Window.

d. After UB 3.0.1.6G has been loaded, use the printouts to reenter the Communications configuration on the TDBM Master machine.

NOTE: It is suggested that sites replace their NETWORK Channel with a new channel that uses the NETPREC Channel.

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e. After the channels have been entered, select Communications under the Comms PDM, hold down the right mouse button (RMB) and select Set Default to store the configuration.

3. AutoForward Tables: In order to retain the AutoForward table configuration for rentry after the installation of UB3.0.1.6G, perform the following on the TDBM Master machine:

a. Select AutoForward under the Comms PDM.

b. Double click each entry and print each Edit Window.

c. After UB 3.0.1.6G has been loaded, use the printouts to reenter the AutoForward configuration on the TDBM Master

machine.

4. DDN Host Table: The DDN Host table can be archived to tape prior to performing the upgrade. Perform the flowing on the TDBM Master machine:

   a. Using the the tar command, save the following two files to tape:

      /h/Nauticus/data/mnt/Messages/Host-Table
      /h/Nauticus/data/mnt/Messages/Host-Table-Altr

   b. After UB 3.0.1.6G has been loaded, un-tar the two files into the following directory:

      /h/data/global/UB/Messages

5. Overlays, PIMTracks, Screen Kilos, and Four Whiskey Grids: If it is necessary to save the above data it will be necessary to transmit each of the Overlays, PIMTracks, Screen Kilos, and Four Whiskey Grids from the TDBM Master Machine to a different TDBM Master Machine. A site can rename the Overlays, PIMTracks, Screen Kilos, and Four Whiskey Grids to names that are in series (i.e: 001, 002, 003), transmit them to a different TDBM Master Machine, perform the upgrade to UB 3.0.1.6G, and transmit the items back. Sites can convert a TDBM Client on the suite into a TDMB Master or they can coordinate with another site (or the OSF) and transmit the Overlays, PIMTracks, Screen Kilos, and Four Whiskey Grids to that site. When the upgrade is complete, the Overlays, PIMTracks, Screen Kilos, and Four Whiskey Grids can be transmitted back. The procedures for configuring a TDBM Master are in the UB System Administrator Guide. The procedures for transmitting Overlays, PIMTracks, Screen Kilos, and Four Whiskey Grids are documented in the UB Users Guide.

6. Briefs and Stored Slides: Briefs and Stored Slides can be archived to tape and restored after the upgrade to UB 3.0.1.6G is complete.

   a. On the TDBM Master Machine tar the following directory to tape:

      /h/Nauticus/data/mnt/StoredScreens

16.3.4 Deinstallation of Superseded Segments

All segments listed in Table 16.2.4-1 should be deinstalled at this time. In particular, the UB segments listed below, must be deinstalled before the GCCS Version 2.2 Kernel upgrade is performed. If any of the

JMCIS/UB related segments are detected by the GCCS COE Kernel *"configure"* script you will be notified and the script will exit.

Printer
Joint Mapping Toolkit
JMTK 2.1.3 Patch
JMCIS Applications
JMCIS Apps 2.1.3 Patch
JMCIS Secret Data
TBMD Demo
Theater Ballistic Missile Defense
UB Applications
UBPATCH
UBApps 2.1.3 Patch
UB_CLEAN
UB_REPLACE

To deinstall the segments in Table 16.3.4-1:

1. Log in as *sysadmin* and bring up the Segment Installer.
2. Deinstall the segments listed in Table 16.3.4-1.

NOTE: Do not deinstall the JMCIS COE, it may corrupt the user menus.

Table 16.3.4-1. Segments to Deinstall

Segment Name	Version
AdHoc Query Character	5.4.3
AHQ Character Patch 2	5.4.6
AHQ Character Patch 3	5.5.2.01
AHQ Character Patch 4	5.5.4e
AHQ Character Patch 5	5.5.4i
AHQ Character Patch 6	5.5.4k
AdHoc Query Graphic	5.4.3
AHQ Graphic Patch 2	5.4.6
AHQ Graphic Patch 3	5.5.2
AHQ Graphic Patch 4	5.5.4e
AHQ Graphic Patch 5	5.5.4i

Table 16.3.4-1. Segments to Deinstall (cont.)

Segment Name	Version
AHQ Graphic Patch 6	5.5.4k
AHQ Graphic Patch 7	5.5.4l
AirFields DB Server	1.0.03
ASET Server	gv.1.02
Auditing	2.1.1
BSM Patch	1.1.01
BSM Patch 1	1.1.06
CCAPPS MM PATCH	1.1
Character Based Interface	1.0.0.1.01
Database User	5.5.2
EM Printer Admin	2.1.9.01
Enhanced Linked Virtual Info System	1.3.02
External Transaction Processor (XTP)	5.5.4g
CCAPPS ORACLE PATCH	1.0
Cmd Ctr Apps	2.1.5
GSORTS Map Retrieval	1.2
GSORTS WORLD DATA	1.2
GSORTS Patch 1	1.0
IMS_RFM	5.3
IMS_RFM Patch Segment 1	5.4.5
IMS_RFM Patch Segment 2	5.5
IMS_RFM Patch Segment 3	5.5.1
IMS_RFM Patch Segment 4	5.5.3b
IMS_RFM Patch Segment 5	5.5.4.01c
JEPES Client	4.01
JMCIS Applications	2.1.3
JMCISApps 2.1.3 Patch	1.0.0

Table 16.3.4-1. Segments to Deinstall (cont.)

Segment Name	Version
Joint Mapping Toolkit Patch 1	1.0.0
Joint Mapping Toolkit	2.1.3
JNAV Patch 4	2.6.0
JOPES Navigation	2.6.0
LOGSAFE Client	2.6.0
Medical Planning and Execution System	5.5.401f
Netscape Web Browser	1.1
Netscape Web Browser Patch 1	1.0.1
NPG	5.0
ORACLE Application Server Tools	7.1.4.05
ORACLE Patch 2	2.0
ORACLE Patch 3	3.0
ORACLE Patch 4	4.0.02
ORACLE Patch 5	5.0
ORACLE NFS Application Server Tools	1.1
Predefined Reports	1.6.1
Predefined Rpts DB Srvr	1.6.1.01
Printer	2.2.1
Reference File Admin	1.2.2
Reqs Dev & Analysis RDA	1.7.12
S&M	5.5.4d
S&M Character	5.4.2.01
S&M Character Patch 4	5.5.4k
S&M Character Patch 5	5.5.4l
S&M Graphic Patch 2	5.5.4.01g
S&M Graphic Patch 3	5.5.4h

Segment Name	Version
S&M Graphic Patch 4	5.5.4k
S&M Graphic Patch 5	5.5.4l
S&M Graphic Patch 7	5.5.5a
S&M Graphic Patch 8	5.5.6b
S&M Graphic Patch 9	1.0.0
Segment Installer Patch 2	2.2.1.3
System Maintenance	1.6
TCC Extrnl Sys Intrfcs	1.2.1.01
UB Applications	2.1.3
UB_CLEAN	2.1.3.5.01
UB_REPLACE	2.1.3.5.01
VIP	1.0.1
VIP ASCII	1.0.1

16.3.5 Oracle Database Pre-Update Procedures

The following processes should be terminated on the JOPES Oracle Database servers before backing out the Solaris patches or installing the GCCS COE Kernel. The System Services function is used to terminate TDS, TP, and Journaling.

1. TDS
2. TP
3. Journaling
4. Oracle

16.3.6 Backing Out of Solaris Patches

The following patches, if they were installed with the save option, must be backed out before the attempting the upgrade.

a. The Jumbo Kernel patches older than 101318-80) must be backed out if they were installed with the save option. If multiple versions of the Jumbo Kernel patch are installed on the system they must be backed out in the reverse order in which they were installed (e.g. 101318-75 before 101318-70). The system must be rebooted after each version of the Jumbo Kernel patch is backed out.

b. Patch 101479-01 or 101479-02 (loaded only on systems with SPARCstorage arrays) must be backed out prior to backing out any version of the Jumbo Kernel patch.

If the GCCS COE Kernel "configure" script determines that the Jumbo kernel patch was installed with the save option, it will notify you and ask you if you wish it to be backed out by the Kernel. If you say [**yes**], the newest of the Jumbo kernel patches, 101318-??, will be backed out. Patch 101479-01 or 101479-02 will be backed out prior to the backout of 101318-?? if it is installed. You will then have to reboot the system and reload the GCCS COE Kernel.

1. To determine if older versions of the Jumbo kernel patch (pre 101318-80) are installed with the save option execute the following:

   cd /var/sadm/patch/101318-*/save <Return>
   ls <Return>

2. If a *"archive.cpio.Z"* file exists, the patch was installed with the save option and must be backed out.

3. Before backing out patch 101318 determine if 101479-01 or 101479-02 is installed.

   cd /var/sadm/patch/101479-*/save <Return>

4. If the system responds that there is no such directory, the patch isn't installed.

5. If the directory exists determine if *"archive.cpio.Z"* exists. If it does then 101479-01 or 101479-02 must be backed out prior to 101318

6. To back out these patches shut the system down and reboot in single user mode:

   cd / <Return>
   init 0 <Return>
   ok **boot -s <Return>**

7. If 101479-?? was installed execute the following to backout the patch:

   cd /var/sadm/patch/101479-* <Return>
   ls <Return>

Identify the version of the patch and use it to execute the following command:

/backoutpatch 101479-02 <Return> or the version that is installed.

8. To backout the jumbo kernel patch execute the following:

cd /var/sadm/patch/101318-* <Return>
./backoutpatch 101318-77 <Return> 77 or the version you have installed.

If several versions of the Jumbo Kernel patch are installed on the system, reboot the system and repeat steps 6 and 8 again.

9. Reboot the system by executing the following:

uadmin 2 0 <Return>
ok **boot -s <Return>**

16.4 Loading the GCCS COE Kernel Version 2.2

1. If the system is not in single user mode execute the following:

init 2 <Return>
init s <Return>

2. Enter the following to ensure that *"/tmp"* is still mounted:

mountall -F ufs <Return>
mount /tmp <Return>

3A. If the Kernel Network Installer is being used {See Section 16.2.2 Kernel Network Installer Instructions} execute the following:

mkdir /installer
mount <hostname kernel installer>:/<location of kernel tar> /installer <Return>
cd /installer <Return>
tar xvf kernel_2.2_tar <Return>

3B. If the GCCS COE Kernel is going to be loaded directly off the tape execute the following:

a. Load the GCCS COE Kernel tape into a tape drive.

b. If the tape drive is attached to the system execute the following:

tar xvf /dev/rmt/ {tape drive number} **m**

c. If the tape drive is attached to another SUN system execute the following:

rsh {Remote systems IP address} **dd if=/dev/rmt/** {tape drive number} **m bs=20b | tar xvBf -**

d. The tar of the tape will take approximately **10 minutes.**

16.5 Executing the Upgrade Process

1. Execute the following to begin the GCCS COE Kernel Upgrade process:

cd /tmp/kernel
./configure

2. The following dialog will be output:

Upgrading system, this will take a while.

Executing SecAdm PreInstall

Upgrading SecAdm and SysAdm Account Groups

Executing GCCS COE Deinstall

Executing UB Core Deinstall

Backing out patches made obsolete by the new cluster.

Backoutpatch Version 3.7 1/24/94

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3. No questions will be asked until the end when it is time to install the latest Solaris OS patches.

4. Answer **[y]** and press **<Return>**.

```
Determining if sufficient save space exists . . .
Sufficient save space exists, continuing
Installing patches located in /tmp/SUNSOLVE/Required
Installing 101317-16 . . .
Installing 101318-80 . . .
      .
      .
      .
```

The installer should monitor the installation of the patches closely. If a patch does not install it will be copied to /opt for installation at a later time. It is extremely important that patch 101318-80 be successfully installed.

5. After the patches have been installed the system will be rebooted.

6. Insure that all patches were loaded by executing the following:

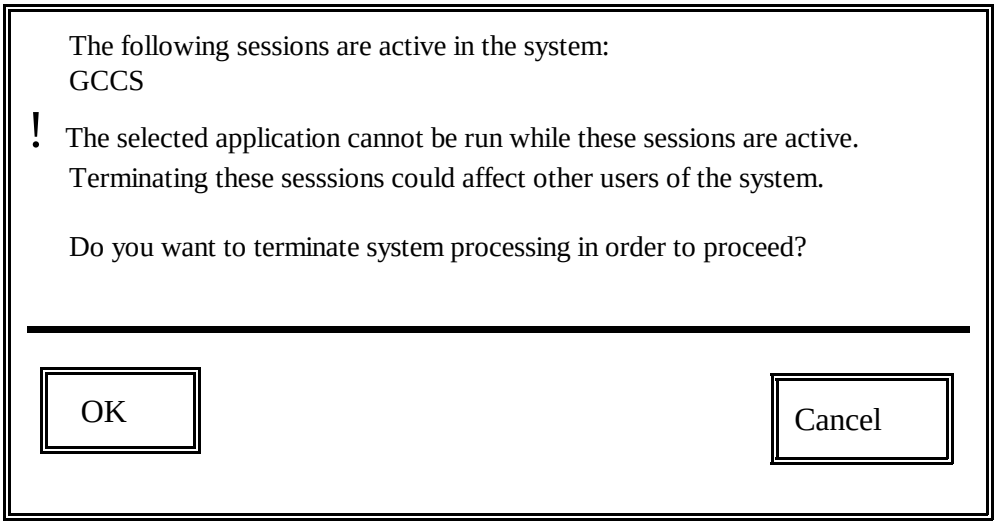
cd /opt <Return>
ls *.tar.gz <Return>

If any patches are listed (e.g. 101318-80.tar.gz) execute the following to install each of them

The following is an example for patch 101318-80.

./gzcat 101318-80.tar.gz | tar xvf - <Return>
cd /opt/101318-80 <Return>
./installpatch /opt/101318-80 <Return>

NOTE: When launching applications with GCCS version 2 2 via the menus or via the icons you may see a window like the following be displayed. To continue click on **[OK].**



16.6 Post GCCS COE Kernel Installation Procedures

To complete the upgrade process the new GCCS COE segment must be installed and configured. In addition the Kernel Patch 1 segment and Kernel Patch 2 must be installed to update the Segment Installer. Both these segments are located on Application Tape 1. Execute the following:

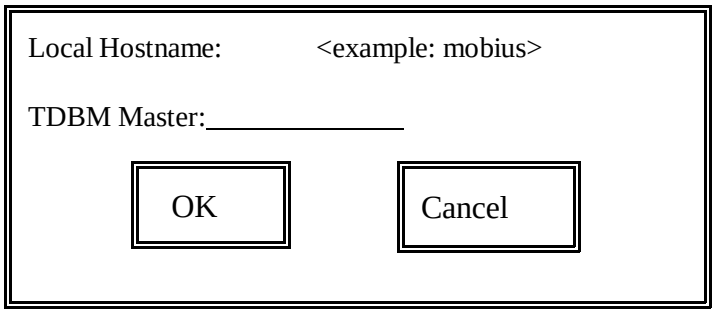
1. Bring up the Segment Installer and select the Kernel Patch 1 segment for installation. Do not reboot the system until the GCCS COE is loaded and configured.

NOTE: Disregard warning message displayed during Kernel Patch 1 installation.

2. After the Kernel Patch 1 is installed select the GCCS COE 2.2 segment for installation. If using tape, insure that you specify */dev/rmt/0mbn.* GCCS COE is actually three segments (GCCS COE, UB Core, and Link 11) and will not load successfully if the *"b"* option if not used.

3. Click on **OK** to continue. After the successful completion of

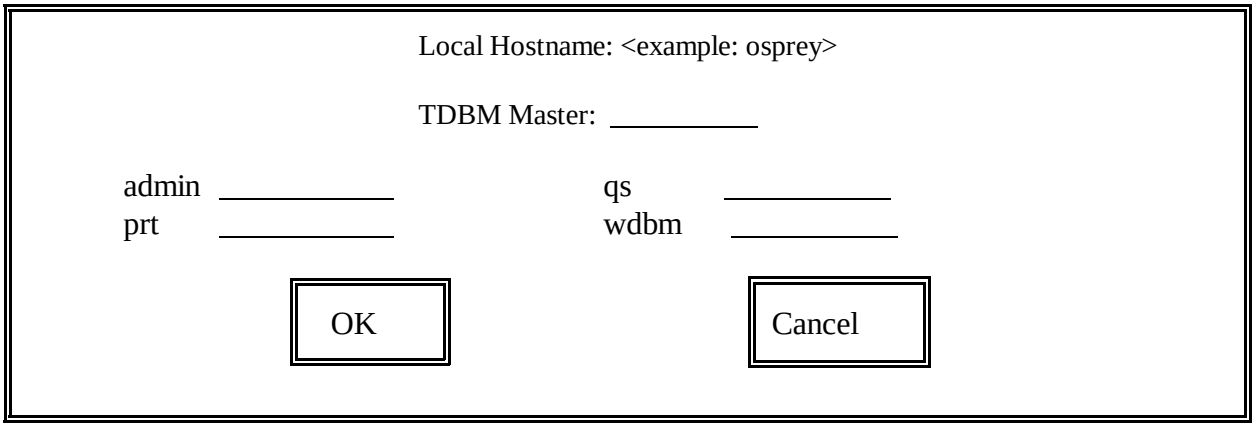
the installation you will be instructed to configure the system by selecting *"System Configuration"* from the *"Networks"* menu. This will display the *"SysCon Window"*. If the SysCon Window looks like the following you must *"Cancel"* and reboot the system.



4. On the right side of the SysCon Window, shown below, verify that the hostname in the Local Hostname: field is your workstation's hostname.

5. In the TDBM Master: field, enter the TDBM Server hostname for your workstation. If you do not have a TDBM Server at your site enter the hostname of the EM server.

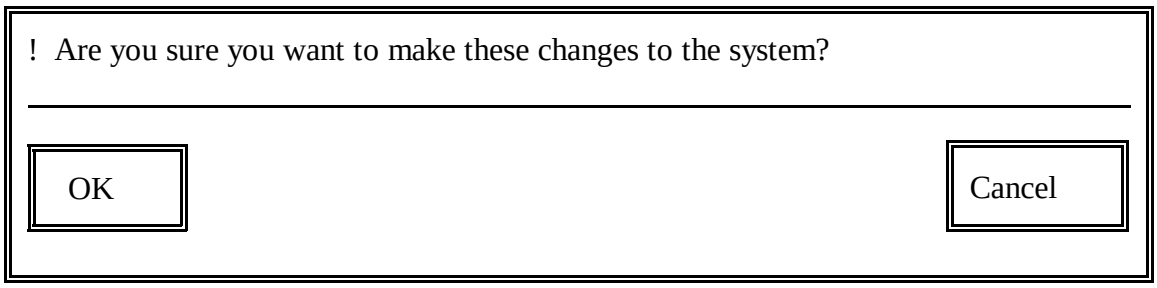
6. In the GCCS environment, both the TDBM server and TDBM clients should have the TDBM server hostname in each of the fields shown below (admin, qs, prt, and wdbm). If you do not have a TDBM Server at your site enter the hostname of the EM server.



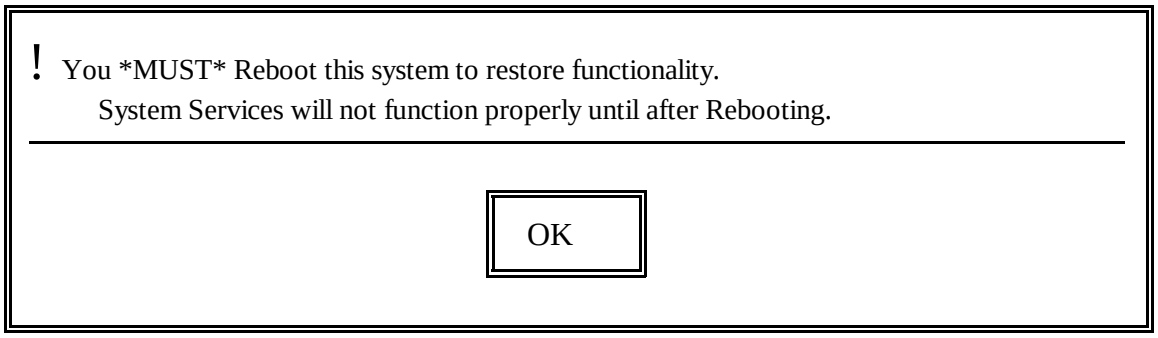
7. On the left side of the SysCon Window the Full Host #1 will be the hostname of the TDBM Master or the EM server if UB is

not being installed . No additional entries should be made to the left side of the SysCon Window until UB is configured (Section 16).

8. Click [**OK**] to save the changes you have made to the Hosts box.



9. Click [**OK**] to continue.



10. Click [**OK**] to continue. After the system is configured you should **reboot** the system as instructed, using the *"Restart"* option under the *"System"* menu.

16.7 GCCS Version 2.2 Upgrade Complete

The GCCS COE Kernel and GCCS COE upgrade are now complete. You should now go to the appropriate section of this manual as listed below:

1. If you are upgrading a GCCS application server, database server or client go to Section 7.6, Building the GCCS Core System. Install all the segments listed in the GCCS Core Segments table (Table 7.6-1) that are not currently installed on the system. Segments with an asterisk (*) next to the name identify segments that new for GCCS Version 2.2.

2. If you are building a Remote Platform go to Section 14.